



GUIDE TO  
THE  
*Butterfly*  
FIELD



SUNNY VALLEY PRESERVE

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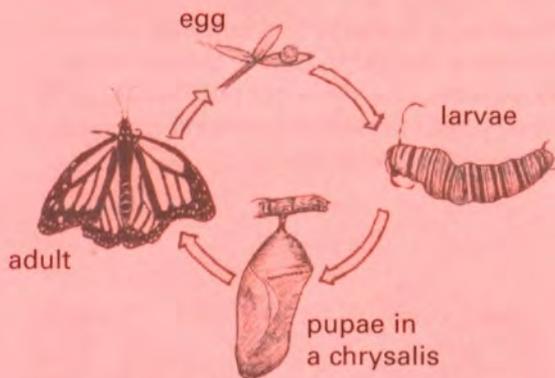


THE  
*Butterfly*  
FIELD

The Butterfly Field consists of approximately six acres of old farm land which is being converted to butterfly habitat. The Butterfly Field can be found along the red-blazed Wetlands Trail (see "Farm and Nature Trail System" brochure available at the trailhead). This meadow was established and initially maintained with funding from the USDA, Wildlife Habitat Incentives Program (WHIP). In the spring of 2001, the field was plowed and treated with lime to bring the pH level to within the range required by the plants used by the butterflies. The field was then divided into three sections and seeded with an assortment of native wildflowers and grasses. A strip in the upland portion was sowed with a mix of purple coneflower, wild blue lupine, coreopsis and big bluestem seeds. A portion of the middle section, which already contained a variety of valuable butterfly plants such as milkweed, aster and goldenrod, was left untouched. The remainder was planted and seeded with a mix of grasses and legumes, such as clover and alfalfa. Wetland areas were seeded with a blend of joe pye weed, purple-stem aster and swamp milkweed. To support butterflies throughout their entire life cycle, some of the selected plants provide nectar for adult butterflies, while some provide a food source for growing caterpillars. Plants were also chosen to ensure a continuous bloom

from spring to fall. As you pass through the field you will see various butterflies feeding on the different types of vegetation. Milkweed, which blooms in July and August, attracts an especially large number of butterflies. If you examine some of the plants closely, you may also be able to find some of the caterpillars. The monarch caterpillar, with its black, white and yellow stripes [see Life Cycle sketch below], is especially easy to spot on its host, the milkweed plant.

## THE *Butterfly* LIFECYCLE



Butterflies and their close relatives, moths and skippers, are insects in the Order Lepidoptera, (meaning "winged with scales"). Throughout history, butterflies have captured imaginations of people in many different cultures, in part because of their beauty, and in part because of the seemingly miraculous transformation that they undergo during their life cycle from a caterpillar to an adult butterfly. Connecticut has approximately 125 species of butterflies, most of which go through two or more generations in one summer. The adult butterfly lays its eggs on a species of plant that the larvae (caterpillar) eats. The caterpillars of most butterfly species will feed on just one kind of plant, which is known as its host. Depending

on the species of butterfly, the adult may lay its eggs on a wildflower, such as milkweed or violet, or it may lay its eggs on the leaves of a tree or shrub such as spicebush, birch, or oak. When the egg hatches, the young caterpillar eats voraciously. The caterpillars of some species will cover an entire tree, and if you stand quietly beneath the tree you can hear the sound of them chewing.

As with all insects, butterflies undergo a life cycle consisting of different stages known as metamorphosis (meaning "change"). Butterfly and moth larvae are called caterpillars.

When the caterpillar is fully-grown, it crawls to a protected spot like the underside of a branch or leaf. There it spins a silk pad, attaches itself to the pad, and hangs upside-down. Contrary to popular belief, most butterflies do not spin cocoons (although moths do). The outer covering, also known as the chrysalis, is simply the "skin," or exoskeleton, which provides protection to the pupa as it matures into an adult.

When the butterfly is ready to emerge (after weeks or months, depending on the species), it swallows air to expand its body and split open the chrysalis. It crawls out and hangs from a branch while its wings expand and harden. Within a few hours it is ready to fly.

Adult butterflies feed on the nectar from many different flowers, including milkweed, dogbane, and other species which are rich in nectar. Some butterflies, like the tiger swallowtails [as shown on opposite side], also gather at mud puddles in order to obtain sodium and other minerals from the soil.

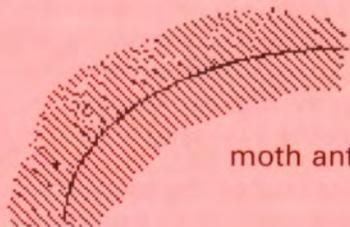


Tiger swallowtails gathering nutrients at a mud puddle.

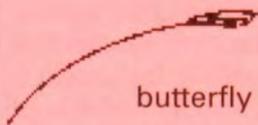
## Butterfly OR MOTH

Butterflies and moths are closely related, and have many similar features. The easiest way to tell a butterfly from a moth is by looking at their antennae. The antennae of a moth are feathered or spiked, while the antennae of a butterfly are thread-like with a clubbed tip.

Typically, butterflies are active in the daytime while moths are nocturnal. Also, butterflies rest with their wings up and not folded flat to their bodies, as moths do.



moth antenna

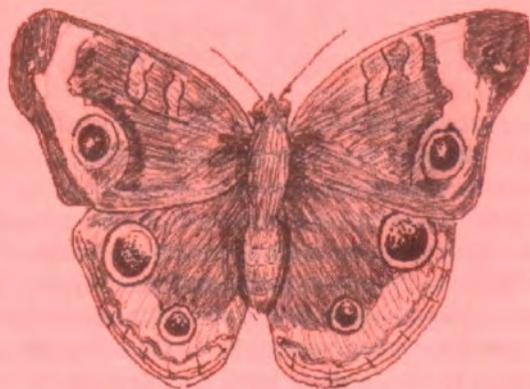


butterfly antenna

## Butterfly DEFENSES

The bright colors of many butterflies would seem to make them easy targets for predators, but butterflies have many ways of defending themselves. As a caterpillar, the monarch feeds on milkweed and incorporates the plant's distasteful toxins into its body. This makes the adult monarch toxic to predators, a fact which it advertises with its bright colors. Any bird that tries to eat a monarch will not make the same mistake twice.

The viceroy butterfly has coloring which is extremely similar to that of the monarch. Though the viceroy is not poisonous, birds which have learned to avoid the monarch will also avoid the viceroy.



Other butterflies (like the buckeye, above) have patches on their wings that look like eyes. Scientists believe these can startle and confuse the butterflies' predators.



## THE BEST WAY TO ATTRACT *Butterflies* TO A GARDEN

is to include plantings that will satisfy all stages of their lifecycle. Flowers that are especially rich in nectar include:

|                       |                   |               |
|-----------------------|-------------------|---------------|
| <i>Aster</i>          | <i>Coneflower</i> | <i>Azalea</i> |
| <i>Butterfly bush</i> | <i>Lupine</i>     | <i>Lilac</i>  |
| <i>Butterfly weed</i> | <i>Phlox</i>      |               |
| <i>Milkweeds</i>      | <i>Zinnia</i>     |               |

The following "host" plants provide food for caterpillars:

|                  |                |                  |
|------------------|----------------|------------------|
| <i>Aspen</i>     | <i>Elm</i>     | <i>Birch</i>     |
| <i>Sorrel</i>    | <i>Dill</i>    | <i>Spicebush</i> |
| <i>Hollyhock</i> | <i>Willow</i>  | <i>Clover</i>    |
| <i>Thistle</i>   | <i>Nettles</i> | <i>Violets</i>   |

Also, be sure not to spray insecticides near any plants intended for butterflies or caterpillars.

### To learn more . . .

Connecticut Butterfly Association (CBA),  
P.O. Box 9004, New Haven, CT 06532-0004

The USGS Northern Prairie Wildlife Research Center web page lists butterflies by state with pictures and other information about each species. <http://www.npwrc.usgs.gov.resource>

*The Butterflies of North America* by James Scott (1986, Stanford University Press).

For information on creating backyard habitat for butterflies and other wildlife, call the USDA Natural Resources Conservation Service at 202-720-5237 or visit their website at [www.nrcs.usda.gov](http://www.nrcs.usda.gov)

## DID YOU KNOW...

- There are approximately 20,000 known species of butterflies in the world, of which about 575 are found in the continental United States.
- Butterflies smell through their antennae and through chemoreceptors on the tips of their legs.
- Monarchs and Mourning Cloaks can live up to nine months, while smaller butterflies may live only a week.
- Most butterflies that live in cold climates spend the winter as caterpillars or pupas. A few species find a safe spot such as a tree crevice or a man-made structure and overwinter as adults. Monarchs from the Northeast migrate thousands of miles to a small group of mountains in central Mexico.
- It is not a good idea to release butterflies at weddings or other special events because they can spread disease to native species and alter the gene pool of genetically distinct populations. Many released butterflies die prematurely because they are set free far from their native habitat or at the wrong time of year.
- To identify a butterfly, you can consult a field guide or the sign at the edge of the field. If you find a new butterfly in the field, let us know, so we can add it to our list!

*Guide to the Butterfly Field was produced with support from Iroquois Gas Transmission System Land Acquisition and Enhancement Fund.*